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US 5775492 A

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(54) Abstract Title

Postcard with a detachable information storage disc (CD or DVD)

(57) A postcard 2 has a disc-shaped recess 4 with adhesive 8 around its periphery so that a CD or DVD 3 can be detachably attached thereto. One embodiment (fig 3) provides the postcard with flaps 13 defined by slits 12 which go above and below the disc 3; adhesive seals 14 secure the disc 3 to the flaps 13. A further embodiment (fig 6) provides the card 2 to be made of the same synthetic resin as the disc 3 so that they are joined by connecting sprues 20 which can be broken to release the disc 3. CD, DVD and other information storage discs can be mailed on postcards.

An information storage disc 3 (eg a CD or DVD) is detachably carried on postcard 2 by adhesive 8 (Fig 1), adhesively sealed flaps 13 (Fig 3) or integrally moulded sprues 20 (Fig 6).

Fig. 1(A)

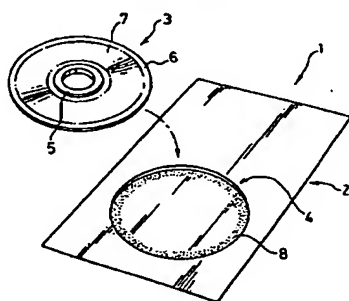


Fig. 1(B)



Fig. 3

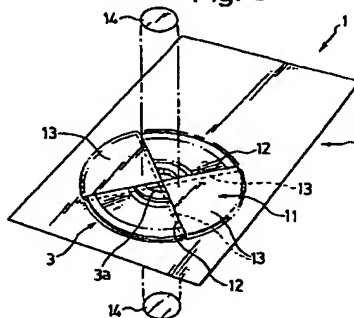
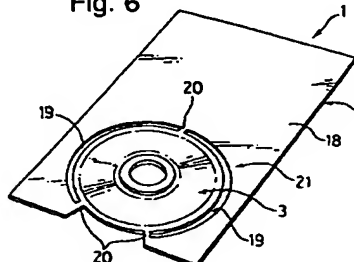


Fig. 6



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Fig. 1(A)

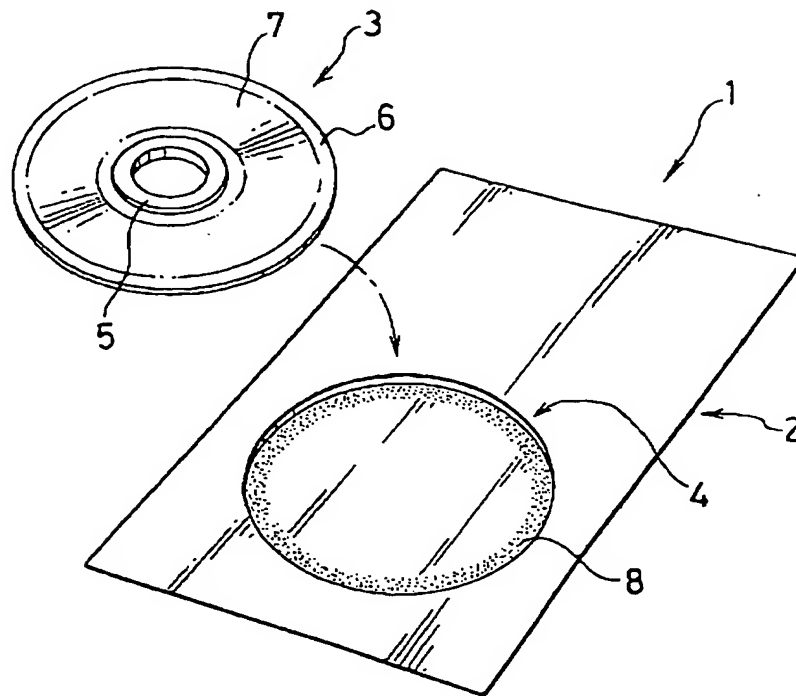


Fig. 1(B)

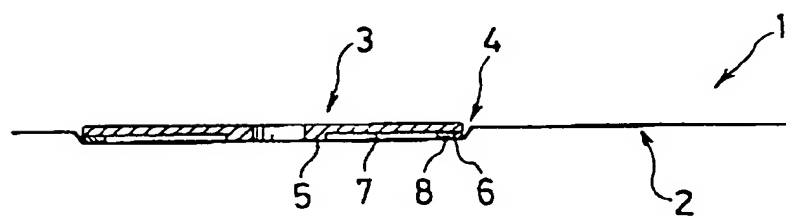


Fig. 2(A)

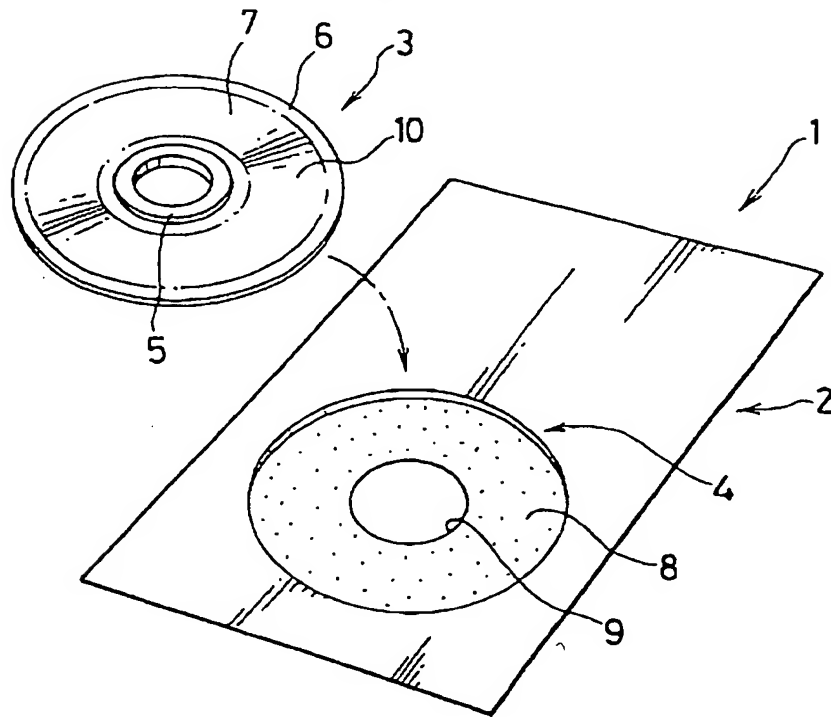


Fig. 2(B)

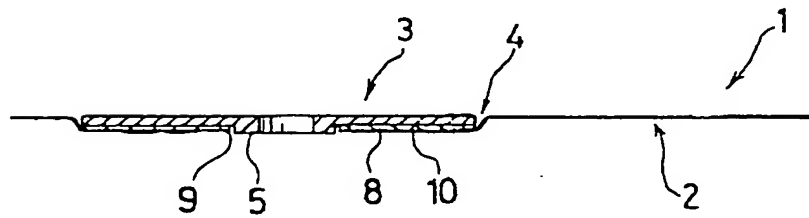


Fig. 3

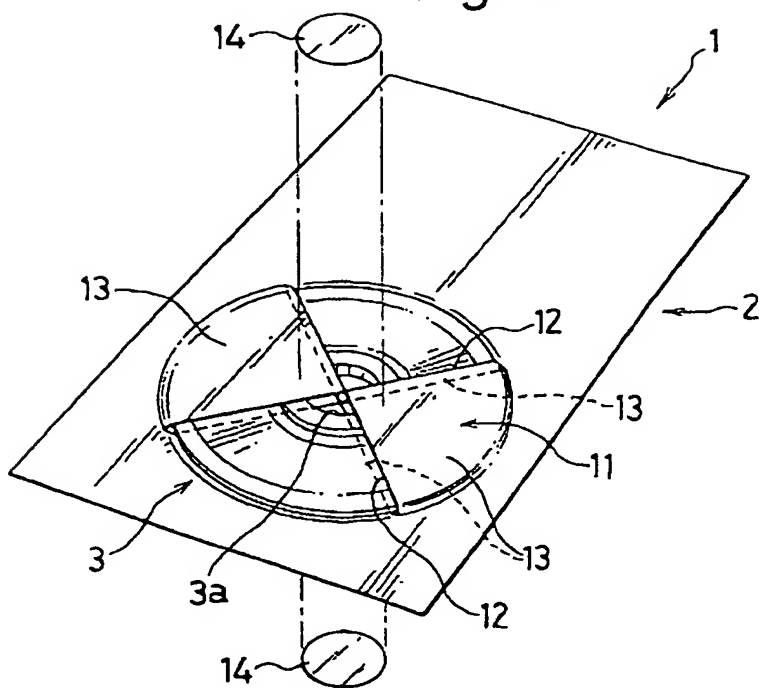


Fig. 4

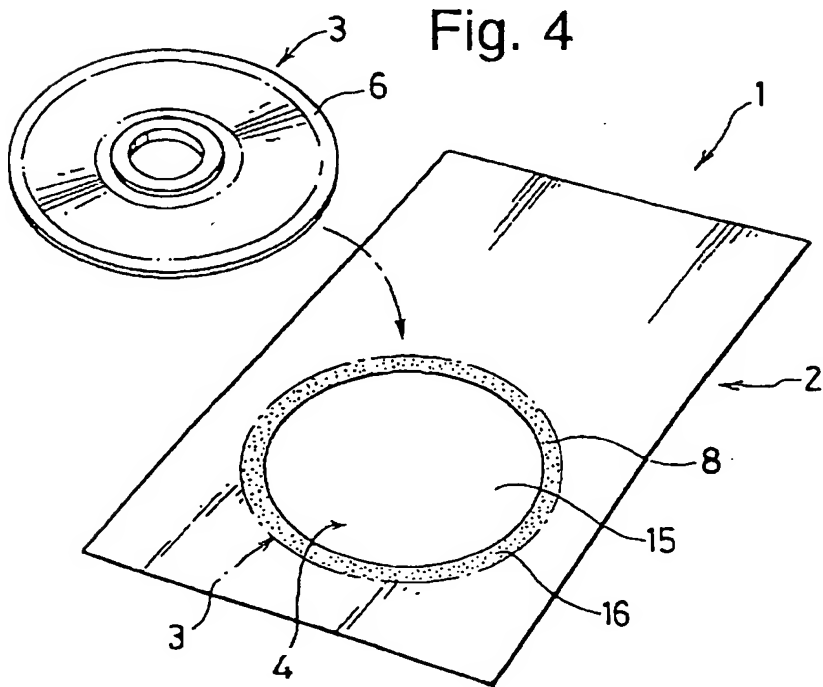


Fig. 5

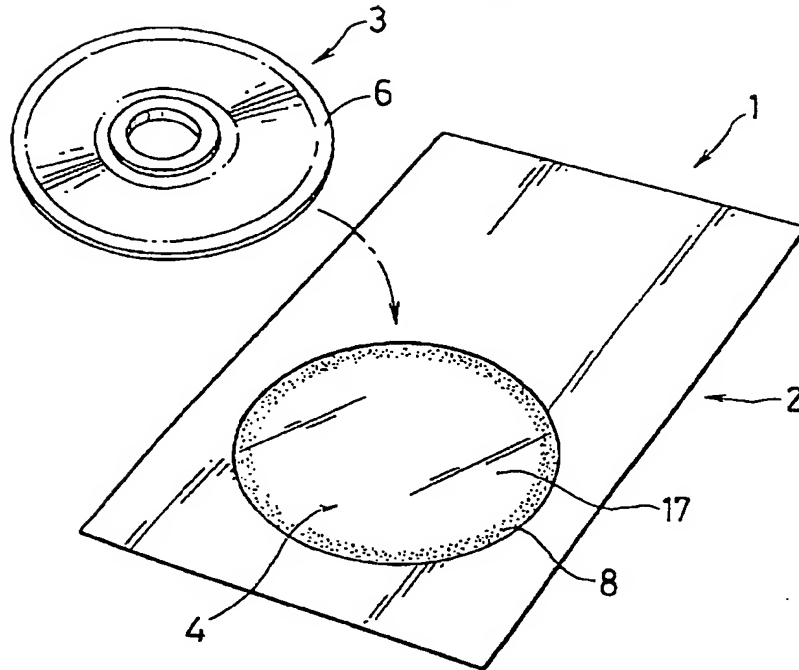
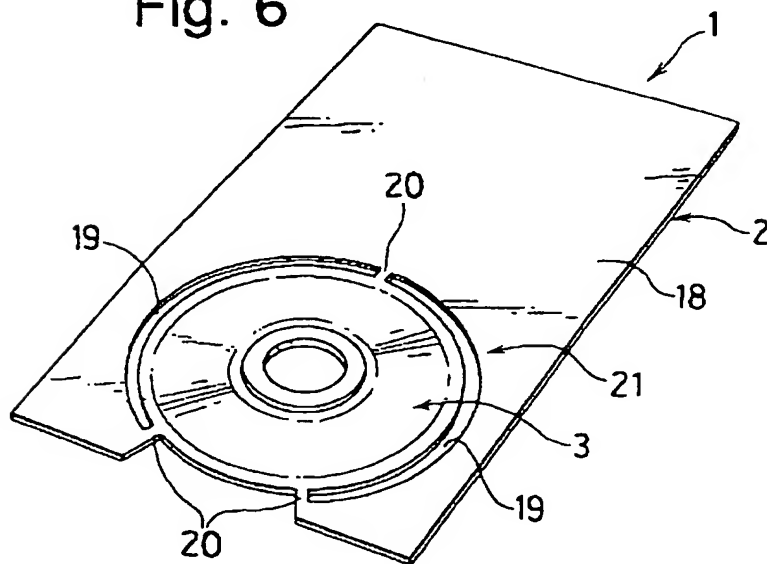


Fig. 6



TITLE OF THE INVENTION

DISC CARRYING POST CARD

BACKGROUND OF THE INVENTION

1. Field of the Invention

5 The present invention relates to a disc carrying post card, and particularly to a post card for carrying a disc such as a compact disc ROM (CD-ROM), a digital versatile disc (DVD), and the like, capable of storing optically readable information.

2. Description of the Prior Art

10 An information storage disc such as a compact disc (CD), a CD read only memory (CD-ROM), a digital versatile disc (DVD), and a DVD read only memory (DVD-ROM) can store optically readable information and provides a large storage capacity. Such an information storage disc is widely used as a medium for storing
15 programs, music, images and the like, accordingly, information is provided by storing it on such an information storage disc.

 As a type of information delivery, direct mail is used for supplying information to an unspecified number of customers. In such a way, it is widely adopted to send post cards which
20 describe advertisement or presents commercial products. However, it is impossible to cover a large amount of information due to a limited area for describing information on such post cards. In this situation, it is noteworthy that a large amount of information is recorded on the information storage disc as
25 described above and an attempt is made to send the information

storage disc for supplying a large amount of information, which cannot be supplied by means of the post card.

In order to supply information using the aforesaid information storage disc, discs must be packed to be mailed.

5 Therefore, this type of information delivery is infeasible at a cost for a post card. As a result, there is a problem of causing high postage costs for mailing such an information storage disc, and it has been impracticable to use the information storage disc as a medium for the purpose of such a direct mail.

10

SUMMARY OF THE INVENTION

It is an object of the present invention to mail an information storage disc storing a large amount of information at a cost for a post card, thereby being capable of providing
15 information such as music, images, text information and the like at a minimal postage cost.

A first aspect of the present invention is to provide a disc carrying post card comprising an information storage disc having a hole at the center thereof for installation on an
20 information read/write device, the disc comprising: a peripheral portion provided around the hole, the peripheral portion having a predetermined thickness, the peripheral portion being used as a non-information recording area; an information storage area portion for storing optically readable information, the
25 information storage area portion having a thickness thinner than

that of the peripheral portion around the hole; and an external peripheral portion having a thickness thinner than that of the peripheral portion around the center hole, the external peripheral portion being used as a non-information recording area, a post card main body provided with a recessed portion at a specified position, the recessed portion being formed by embossing the main body in a circular form corresponding to a shape of the information storage disc, and adhesive means for attaching the external peripheral portion of the information storage disc to the recessed portion in a detachable fashion so as that information recording side of the information storage disc faces the recessed portion.

Here, the recessed portion may be provided with a through hole corresponding to the peripheral portion of the information storage disc such that the peripheral portion around the center hole is fit thereto.

A second aspect of the present invention is to provide a disc carrying post card comprising an information storage disc having a hole at the center thereof for installation on an information read/write device, the disc comprising: a peripheral portion provided around the hole, said peripheral portion having a predetermined thickness, the peripheral portion being used as a non-information recording area; an information storage area portion for storing optically readable information, the information storage area portion having a thickness thinner than

that of the peripheral portion around the hole; and an external peripheral portion having a thickness thinner than that of the peripheral portion around the center hole, the external peripheral portion being used as a non-information recording area, a post card main body, on which a disc-form region is provided at a specified position corresponding to the shape of the information storage disc, said disc-form region being divided by radial slits extending from the center thereof to provide a plurality of support flaps each having a shape of sector, wherein each of the support flaps is alternately placed on both sides of the information storage disc positioned to said disc-form region, and wherein an adhesive seal is attached to tips of the support flaps on each side of the information storage disc to hold the information storage disc.

15 A third aspect of the present invention is to provide a disc carrying post card comprising an information storage disc having a hole at the center thereof for installation on an information read/write device, the disc comprising: a peripheral portion provided around the hole, the peripheral portion having a predetermined thickness, the peripheral portion being used as a non-information recording area; an information storage area portion for storing optically readable information, the information storage area portion having a thickness thinner than that of the peripheral portion around the hole; and an external peripheral portion having a thickness thinner than that of the

peripheral portion around the center hole, the external peripheral portion being used as a non-information recording area, a post card main body provided with a recessed portion at a specified position, the recessed portion being made smaller
5 than the information storage disc in size, and adhesive means for attaching the external peripheral portion of the information storage disc to external peripheral portion of the recessed portion in a detachable fashion so as that information recording side of the information storage disc faces the recessed portion.

10 A fourth aspect of the present invention is to provide a disc carrying post card comprising an information storage disc having a hole at the center thereof for installation on an information read/write device, the disc comprising: a peripheral portion provided around the hole, the peripheral portion having
15 a predetermined thickness, the peripheral portion being used as a non-information recording area; an information storage area portion for storing optically readable information, the information storage area portion having a thickness thinner than that of the peripheral portion around the hole; and an external
20 peripheral portion having a thickness thinner than that of the peripheral portion around the center hole, the external peripheral portion being used as a non-information recording area, a post card main body provided with a recessed portion at a specified position, the recessed portion being formed by
25 providing an opening having a size of capable of receiving the

information storage disc and using a sheet to cover the opening;
and adhesive means for attaching the external peripheral portion
of the information storage disc to the recessed portion in a
detachable fashion so as that information recording side of the
5 information storage disc faces the recessed portion.

A fifth aspect of the present invention is to provide a
disc carrying post card comprising an information storage disc
made of a synthetic resin material, the disc having a hole at
the center thereof for installation on an information read/write
10 device, the disc comprising; a peripheral portion provided around
the hole, the peripheral portion having a predetermined thickness,
the peripheral portion being used as a non-information recording
area; an information storage area portion for storing optically
readable information, the information storage area portion
15 having a thickness thinner than that of the peripheral portion
around the hole; and an external peripheral portion having a
thickness thinner than that of the peripheral portion around
the center hole, the external external peripheral portion being
used as a non-information recording area, a post card plate having
20 an opening larger than the information storage disc, the post
card plate being made of the same synthetic resin as that of
the information storage disc, and a connecting portion for
connecting the post card plate to the information storage disc
between the periphery of the information storage disc and the
25 periphery of the opening of the post card plate in a detachable

fashion. Here the information storage disc, the post card plate, and the connecting portion are made of the same synthetic material and unified by injection molding.

5 The present invention allows an information storage disc storing a large amount of information to be mailed in the form of a post card. Therefore, a large amount of information can be supplied at a minimal postage cost, whereby providing information highly economically. In the present invention, the information storage disc itself is easily detachable.

10 Accordingly, a recipient can easily remove the disc from the post card and mount the disc on a reading apparatus, and information can be easily supplied to recipients without troubling them. The present invention provides a highly practical effect.

15

BRIEF DESCRIPTION OF THE DRAWINGS

These and other objects and advantages of the present invention will become clear from the following description with reference to the accompanying drawings, wherein:

20 Fig. 1(A) is a schematic perspective view of a first embodiment of a disc carrying post card according to the present invention;

Fig. 1(B) is a sectional view showing an essential portion of the first embodiment;

25 Fig. 2(A) is a schematic perspective view showing a

modification of the first embodiment according to the present invention;

Fig. 2(B) is a sectional view showing an essential portion of the modified first embodiment shown in Fig. 2(A);

5 Fig. 3 is a schematic perspective view of a second embodiment according to the present invention;

Fig. 4 is a schematic perspective view of a third embodiment according to the present invention;

Fig. 5 is a schematic perspective view showing a
10 modification of the third second embodiment according to the present invention; and

Fig. 6 is a schematic perspective view of a fourth embodiment according to the present invention.

15 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The present invention will be described in detail with reference to the accompanying drawings by way of embodiments.

In figures, the reference numeral 1 designates a disc carrying post card. The post card 1 comprises a post card main
20 body 2 and an information storage disc 3 having a diameter of 8 cm. As shown in figure, the post card body 2 is provided with a recessed portion 4 at a specified position of the rear side thereof. The recessed portion 4 is formed by embossing it in a circular form corresponding to a shape of the information
25 storage disc 3. The information storage disc 3 has a hole at

the center thereof for installation on an information read/write device. The disc itself comprises a peripheral portion 5 around the center hole (hereinafter called as "center hole peripheral portion 5"), an external peripheral portion 6 and an information storage area portion 7 for storing optically readable information. Here, the center hole peripheral portion 5 and the external peripheral portion 6 are non-information recording area and thus contain no information. The external peripheral portion 6 and information storage area portion 7 have a thickness of, for example, 0.6 mm or less and are made thinner than the center hole peripheral portion 5. The information storage disc 3 is mounted on the recessed portion 4 in such a way that information recording side of the information storage disc 3 faces the recessed portion 4. As shown in Fig. 1(B), the external peripheral portion 6 of the information storage disc 3 is attached to the recessed portion 4 by means of adhesive means 8 such as peelable and weak adhesive, thereby the adhesive means 8 attaches the information storage disc 3 to the recessed portion 4 in a detachable fashion.

For a concrete example of this disc carrying post card 1, for example, a polycarbonate resin is used as a material for a base material of the information storage disc 3, the diameter of the disc is 8 cm, and the thickness of the information storage area portion 7 is 0.6 mm or less. Appropriate selecting of a weight of the post card main body 2 allows an overall weight

of the disc carrying post card to be equivalent to that of a conventional post card, resulting in being capable of mailing it as a post card.

Figs. 2(A) and 2(B) show modification of the
5 above-mentioned embodiment of the present invention. In this embodiment, the above-mentioned recessed portion 4 is provided with a through hole 9 corresponding to the center hole peripheral portion 5 of the information storage disc 3. The projected center hole peripheral portion 5 is fit to the through hole 9. Further,
10 adhesive means 8 attaches an entire surface of the information recording side 10 which faces the recessed portion 4 to the recessed portion 4 in a detachable fashion. In the above example, although the adhesive means 8 attaches the entire surface of the information recording side 10 facing the recessed portion
15 4 to the recessed portion 4 in a detachable fashion, the present invention is not limited thereto. For example it is possible to attach only the external peripheral portion 6 of the information storage disc 3 to the recessed portion 4 in a detachable fashion. As adhesive means 8, an adhesive which has
20 weak, peelable adhesive strength and does not remain on the detached disc when peeled may be used. In addition, it is possible to use a peelable sheet comprising temporarily bonded two films. Such a peelable sheet can be employed to fit the information storage disc 3 to the recessed portion 4 in a
25 detachable fashion. It is also allowed to use a resin having

a thermo-compression adhesive property. Such a resin may be applied to the recessed portion 4 corresponding to the external peripheral portion 6 or the entire surface of the information storage disc 3 by thermo-compression bonding for retaining the information storage disc 3 in a detachable fashion.

The above example provides the recessed portion with a through hole corresponding to the center hole peripheral portion of the information storage disc. However, this through hole needs not to be a substantial hole. It is also possible to provide the recessed portion 4 with another recessed portion corresponding to the center hole peripheral portion for receiving it. In an alternative example, an adhesive sheet may be used to cover the through hole in the recessed portion 4 in a detachable fashion.

Fig. 3 shows the second embodiment of the present invention. In this embodiment, a disc-form region 11 is provided at a specified position on the post card main body 2 corresponding to the shape of the information storage disc 3. The disc-form region 11 is composed by being divided by radial slits 12 to provide, for example, four support flaps 13 having a shape of sector. Each of the support flaps 13 can be raised to be folded at an external portion of the disc-form region 11. Further, each of the support flaps 13 is alternately placed on both sides of the information storage disc 3 positioned to disc-form region 11 to retain the disc. An adhesive seal 14 is attached to tips

of the support flaps 13 on each side of the information storage disc 3, thereby being attached to the center of information storage disc 3 to hold the information storage disc 3 in cooperation with the plurality of support flaps 13 on both sides.

5 As a result, a post card carrying information storage disc 3 can be provided.

Fig. 4 shows the third embodiment of the present invention. In this embodiment, the recessed portion 4 is formed at a specified position of the post card main body 2 by using a sheet 15 such

10 as a paper sheet or the like to cover an opening smaller than the size of the information storage disc 3. The external peripheral portion 6 of the information storage disc 3 is attached to the external peripheral portion 16 of the recessed portion 4 by means of adhesive means 8 in a detachable fashion.

15 Fig. 5 shows a modification of the third embodiment. The recessed portion 4 is formed at a specified position of the post card main body 2 by using a sheet 17, such as a paper sheet, a transparent plastic film, to cover an opening having a size of capable of receiving the information storage disc 3. The

20 information storage disc 3 is mounted on the recessed portion 4 so that the information recording side of the information storage disc 3 faces the recessed portion 4 and the external peripheral portion 6 of the information storage disc 3 is attached to the sheet 17 by means of adhesive means 8 in a detachable

25 fashion.

Fig. 6 shows the fourth embodiment of the present invention. In this embodiment, the post card main body 2 itself comprising a post card plate 18 for describing an address and the like is made of the same synthetic resin material as that of the base material of the information storage disc 3. Further, the post card main body 2 has an opening larger than the size of the information storage disc 3. The disc 3 and the post card main body 2 are unified by a connecting portion 20 provided between the periphery of the information storage disc 3 and the periphery of the opening of the post card plate 18 in a detachable fashion. In Fig. 6, the information storage disc 3 is surrounded by arc-shape separation 21 which is formed by alternate arrangement of slits 19 and the short width connecting portions 20. The number and position of the arrangement of these slits and the connecting portions are not limitative to the shown embodiment. Thereby the short width connecting portions 20 connect the post card plate 18 to the information storage disc 3 in a detachable fashion. The short width connecting portion 20 of the separation 21 can be easily broken, preventing an unfavorable effect such as breakage on the information storage disc 3 when detached. In this embodiment, the connecting portion may be formed by injection molding at the same time when the plate and the disc are molded. Alternatively, it is possible to insert separately molded connecting portion between the plate and the disc and weld it thereto.

Each of the above-mentioned embodiments exemplifies an information storage disc made of polycarbonate resin as a base material thereof. The present invention is not limited thereto and may employ other materials for use in such an information storage disc. The present invention does not specify strength or hardness of information storage discs and is applicable to other characteristics.

While there has been described what are at present considered to be preferred embodiments of the present invention, it will be understood that various modifications may be made thereto, and it is intended that the appended claims cover all such modifications as fall within the true spirit and scope of the invention.

WHAT IS CLAIMED IS:

1. A disc carrying post card comprising:

an information storage disc having a hole at the center thereof for installation on an information read/write device,

5 said information storage disc comprising

a peripheral portion provided around the hole, said peripheral portion having a predetermined thickness, said peripheral portion being used as a non-information recording area,

10 an information storage area portion for storing optically readable information, said information storage area portion having a thickness thinner than that of the peripheral portion around the hole, and

an external peripheral portion having a thickness thinner than that of the peripheral portion around the center hole, said external peripheral portion being used as a non-information recording area;

a post card main body provided with a recessed portion at a specified position, said recessed portion being formed by embossing the main body in a circular form corresponding to a shape of said information storage disc; and

adhesive means for attaching the external peripheral portion of the information storage disc to the recessed portion in a detachable fashion so as that information recording side of the information storage disc faces the recessed portion.

2. A disc carrying post card according to claim 1, wherein said recessed portion is provided with a through hole corresponding to the peripheral portion of the information storage disc such that the peripheral portion around the center hole is fit thereto.

5 3. A disc carrying post card comprising:

an information storage disc having a hole at the center thereof for installation on an information read/write device, said information storage disc comprising

a peripheral portion provided around the hole, said
10 peripheral portion having a predetermined thickness, said peripheral portion being used as a non-information recording area,

an information storage area portion for storing optically readable information, said information storage
15 area portion having a thickness thinner than that of the peripheral portion around the hole, and

an external peripheral portion having a thickness thinner than that of the peripheral portion around the center hole, said external peripheral portion being used as a
20 non-information recording area;

a post card main body, on which a disc-form region is provided at a specified position corresponding to the shape of the information storage disc, said disc-form region being divided by radial slits extending from the center thereof to provide
25 a plurality of support flaps each having a shape of sector,

wherein each of the support flaps is alternately placed on both sides of the information storage disc positioned to said disc-form region, and wherein an adhesive seal is attached to tips of the support flaps on each side of the information storage
5 disc to hold the information storage disc.

4. A disc carrying post card comprising:

an information storage disc having a hole at the center thereof for installation on an information read/write device, said information storage disc comprising

10 a peripheral portion provided around the hole, said peripheral portion having a predetermined thickness, said peripheral portion being used as a non-information recording area,

an information storage area portion for storing
15 optically readable information, said information storage area portion having a thickness thinner than that of the peripheral portion around the hole, and

an external peripheral portion having a thickness thinner than that of the peripheral portion around the center
20 hole, said external peripheral portion being used as a non-information recording area;

a post card main body provided with a recessed portion at a specified position, said recessed portion being made smaller than the information storage disc in size; and

25 adhesive means for attaching the external peripheral

portion of the information storage disc to external peripheral portion of the recessed portion 4 in a detachable fashion so as that information recording side of the information storage disc faces the recessed portion.

5 5. A disc carrying post card comprising:

an information storage disc having a hole at the center thereof for installation on an information read/write device, said information storage disc comprising

10 a peripheral portion provided around the hole, said peripheral portion having a predetermined thickness, said peripheral portion being used as a non-information recording area,

15 an information storage area portion for storing optically readable information, said information storage area portion having a thickness thinner than that of the peripheral portion around the hole, and

20 an external peripheral portion having a thickness thinner than that of the peripheral portion around the center hole, said external peripheral portion being used as a non-information recording area;

25 a post card main body provided with a recessed portion at a specified position, said recessed portion being formed by providing an opening having a size of capable of receiving the information storage disc and using a sheet to cover said opening; and

adhesive means for attaching the external peripheral portion of the information storage disc to the recessed portion in a detachable fashion so as that information recording side of the information storage disc faces the recessed portion.

5 6. A disc carrying post card comprising:

an information storage disc made of a synthetic resin material, said disc having a hole at the center thereof for installation on an information read/write device, said information storage disc comprising

10 a peripheral portion provided around the hole, said peripheral portion having a predetermined thickness, said peripheral portion being used as a non-information recording area,

an information storage area portion for storing
15 optically readable information, said information storage area portion having a thickness thinner than that of the peripheral portion around the hole, and

an external peripheral portion having a thickness thinner than that of the peripheral portion around the center
20 hole, said external peripheral portion being used as a non-information recording area;

a post card plate having an opening larger than said information storage disc, said post card plate being made of the same synthetic resin as that of said information storage
25 disc; and

a connecting portion for connecting said post card plate to the information storage disc between the periphery of the information storage disc and the periphery of the opening of the post card plate in a detachable fashion.

7. A disc carrying post card, substantially as herein before described with reference to, and as shown in, Figures 1A and 1B of the accompanying drawings.

8. A disc carrying post card, substantially as herein before described with reference to, and as shown in, Figures 2A and 2B of the accompanying drawings.

9. A disc carrying post card, substantially as herein before described with reference to, and as shown in, Figure 3 of the accompanying drawings.

10. A disc carrying post card, substantially as herein before described with reference to, and as shown in, Figure 4 of the accompanying drawings.

11. A disc carrying post card, substantially as herein before described with reference to, and as shown in, Figure 5 of the accompanying drawings.

12. A disc carrying post card, substantially as herein before described with reference to, and as shown in, Figure 6 of the accompanying drawings.

13. Any novel feature or combination of features disclosed herein.



Application No: GB 0010202.0
Claims searched: 1-12

Examiner: Brendan Churchill
Date of search: 13 July 2000

Patents Act 1977 Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK CI (Ed.R): B6A (ADE)

Int CI (Ed.7): B42D (15/02, 15/04)
B65D (85/02, 85/57)

Other: Online: EPODOC, JAPIO, WPI

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
A	JP 110349002 A (AIZAWA) see WPI Abstract Accession No. 2000-111293/10	1-5
A,P	JP 080118852 A (BAN) see WPI Abstract Accession No. 1996-282484/29	1-5
X	JP 010214486 A (HITACHI) see abstract	6
A	US 5775492 (BAN) see abstract	1-5

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